How’s Your Posture?
Postural Awareness for Older Adults

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How’s Your Posture?
Postural Awareness for Older Adults

Presenters
Sanjay Sarkar, Concordia University
Jane Pederson, Stratis Health
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Changes that Occur with Aging

- Decline in sensory and motor neurons
- Lean muscle mass decreases
- Muscles can become more rigid and lose tone
- Decline in bone mass
- Loss of fluid in intervertebral discs
- Fluid in joints decreases
- Increase prevalence of diseases such as osteoporosis and different forms of arthritis

Common Clinical Assessment Domains

- Functional status
  - ADLs and IADLs
- Mobility
  - Gait speed
- Nutrition
- Vision
- Hearing
- Cognitive function
- Depression/mental health
Introduction

- Posture as Wellness Indicator
- Connection to Self Image
- Pain, Mobility
- Quality of Life
- Common Changes, Assessment, Prevention

Objectives

- Discuss importance of postural awareness
- Understand and identify optimum posture
- Recognize and avoid poor posture
- Understand some of the conditions associated with postural imbalances
- Develop postural self-care plan
Posture

- **Alignment** of body in space **against** force of **gravity** while interacting with the environment **efficiently**

Importance of Proper Posture

- Quality of life
- Self confidence
- Slimmer and younger
- Cognitive feedback
- Breathing mechanics
- Reduced chances of
  - Circulation and digestion issues
  - **Muscle and joint problems**
    - Spinal health
  - Risk of falls
Poor Posture Can Cause

- Joint pain
  - Low back = 63%
  - Neck = 53%
  - Shoulder = 38%
- Reduced function
- Increased falls risk
  - 1 of 3 elderly adults
  - 2.3 million non-fatal fall injuries /year
  - >662,000 hospitalized
- Behavioral changes
  - Depression
  - Stress
  - Constipation
  - Look heavier
  - Poor circulation, digestion, and lung function
  - Headache and jaw pain

Optimum Posture Identification

- Regular Assessment
  - Reduce pain and dysfunction
  - Prevent long term structural changes
Postural Assessment

- Check yourself in a mirror if you are near one
- Or, you can check your self later
- Or, if you have a partner you can check him/her as we go along

Postural Assessment

- Ears level
- Shoulder level
- Hips level
- Nose, chin, breastbone midline
- Knees, feet
Postural Assessment (contd..)

- Ear over shoulder
- Shoulder joint center
- Arm bisecting the rib cage
- Hand over hip joint center
- Knee joint center
- Ankle joint center

Postural Assessment (contd..)

- Curvatures
  - Cervical
  - Thoracic
  - Lumbar
Postural Assessment

- Muscular interconnectedness
  - Tight/weak
    - Imbalance

Wellness Tree

Best-Martini, E.; Weeks, M.A.; and Wirth, P. Long term care for activity professionals, social services professionals, and recreational therapists. 6th ed.
http://www.google.com/search?biw=1280&bih=615&tbm=isch&sa=1&q=parkinson+patient+standing&oq=parkinson+patient+standing&gs_l=psy-ab.3...43179.44563.0.45183

https://www.youtube.com/watch?v=o625rylh3bY
Effect of Poor Posture

- Associated dysfunction
  - Forward head
  - Rounded Shoulders

- Our Study, Sarkar and Ludewig, 2014:
  - Shoulder motion
  - Thoracic kyphosis
  - Shoulder strength

Long Standing Poor Posture Can Lead To

- Abnormal body alignment

- Spinal stress and strain

- Muscular imbalances

http://www.spineuniverse.com/professional/case-studies/
Common Abnormal Spinal Posture

- Kyphotic-lordotic
- Flat back
- Sway back

Hyper-kyphosis (Hunched back)

- Anterior translation of head
- Internal rotation of scapular blade
- Internal rotation and adduction of humerus
- Forward leaning posture
  - Increased risk of falls
  - Neural impingement
  - Facet joint arthropathy
  - Stress on disks
Crossed Syndromes - Upper Crossed

- Weak: Cervical flexors
- Tight: Suboccipitals, Upper trapezius, Levator scapulae

Upper crossed syndrome

Crossed Syndromes - Lower Crossed

- Weak: Abdominals
- Tight: Thoracolumbar extensors
- Weak: Gluteus maximus

Lower crossed syndrome
Poor Habits

- Sitting duration and position


Frailty

- 5 criteria:
  1. Weight loss: Sudden, unexplained
  2. Exhaustion: Short distance
  3. Low physical activity: Mostly sedentary
  4. Weakness: Inability to perform ADL
  5. Walking speed

- Pre-frail stage: 1-2/5
- Frail stage: 3/5

Xue, 2011
Walking Speed = The Sixth Vital Sign

- Correlates with functional ability and balance confidence
- Potential to predict the following:
  - Future health status
  - Functional decline
  - Hospitalization, discharge location, and mortality

CEEAA Classification

- **Fun**
  - 1.5 m/sec or greater
- **Functional**
  - 1.0 to 1.5 m/sec
- **Frail**
  - Less than 1.0 m/sec
- **Failure**
  - Less than 0.5 m/sec

Fritz and Lusardi, 2009

Postural Corrective Exercises

Different Levels of Balance
Postural Corrective Exercises

Level 1

Level 2

http://casperjournal.com/sports/article_4d273574-5591-56d7-8db7-cb7638a1ee7b.html
Postural Corrective Exercises

Recommendations

- Prevention
- Lengthen/Strengthen
- Cautionary Notes
Take Home Message

- Be aware of yourself and the environment you interact with.
- Remaining unaware of your posture and allowing yourself to be in bad posture throughout your day causes compensation in the spine.
- Regular assessment will help prevent development of bad postural habit.
- Care should be taken if you see any postural distortion from normal.
- It is important to appreciate that poor posture can present without pain or pathology.
- One should be cognizant of such information and be careful to determine relevance of abnormal posture.

Reference List

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Questions?
contact
info@mngero.org

NEXT WEBINAR
December 12, 2017
noon - 1:00 pm

Seniors and Technology:
Observations from Above and at Ground Level

By: Kate Ingalls-Malone & Sharon Blume